

April 30, 2020

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Subject: **Trip Generation Letter**
Carolina Legacy Volleyball
Rolesville, North Carolina

Dear Mr. Johnson:

This letter provides an estimate of the trip generation for the proposed Carolina Legacy Volleyball development located in the southwest quadrant of the intersection of W Young Street and Granite Falls Boulevard in Rolesville, North Carolina. The proposed development is anticipated to consist of a 20,820 sq. ft. volleyball facility. Access to the site is proposed via one (1) full movement site driveway along Granite Vista Drive. Refer to the attachments for the proposed site plan.

Trip Generation

The proposed development is anticipated to consist of a 20,820 sq. ft. volleyball facility. Based on discussions with the client, the development is anticipated to include four indoor volleyball courts available for use during the weekday from 4:30 PM – 9:30 PM and weekend use during the club season, which has been approximated November through April. It should be noted that four additional sand volleyball courts are offered outside; however, it is expected that these courts would operate during different peak seasons and different peak hours. Based on the expected facility operations, weekday PM and Saturday peak hours were utilized for the purposes of this study. The proposed development is anticipated to serve primarily as a training facility. Three of the four indoor courts are expected to serve approximately 10 players with 1-2 coaches per team during weekday evening practices with the fourth court anticipated to be used for one-on-one training.

Average weekday daily, AM, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition utilizing the most recent North Carolina Department of Transportation (NCDOT) Congestion Management rates vs. equation spreadsheet. It was determined that the recreational community center land use would provide the most accurate results for the total trip generation purpose of the proposed site based on the ITE *Trip Generation Manual*, 10th Edition descriptors. It should be noted that this land use is based on more data than its similar land uses, and includes



Saturday and Sunday peak hour trips, which other similar land uses do not. Refer to Table 1 below for a summary of the trip generation.

Table 1: Site Trip Generation Summary

Land Use (ITE Code)	Intensity	Weekday Daily Traffic (vpd)	Weekday PM Peak Hour Trips (vph)		Saturday Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Recreational Community Center (495)	20,820 sq. ft.	600	23	25	12	10

As shown in Table 1, it is estimated that the site is expected to have approximately 600 trips during a typical 24-hour weekday period. Of the daily site trips, it is anticipated that 48 total trips (23 entering and 25 exiting) will occur during the weekday AM peak hour and 22 total trips (12 entering and 10 exiting) will occur during the Saturday peak hour.

Based on discussions with the client, the development is anticipated to include four indoor volleyball courts used primarily for training purposes. Three of the four indoor courts are expected to serve approximately 10 players with 1-2 coaches per team during weekday evening practices with the fourth court anticipated to be used for one-on-one training. It should be noted that four additional sand volleyball courts are offered outside; however, it is expected that these courts would operate during different peak seasons and different peak hours. The above weekday daily traffic trip generation is expected to be conservative due to the anticipated limited operational hours and the peak hour generation is expected to be reasonable based on the provided information.

The Town of Rolesville threshold warranting a Traffic Impact Analysis (TIA) is 1,000 or more new trips per day or 100 or more new trips during the peak hour. Based on the Town's ordinance, the proposed Carolina Legacy Volleyball development is anticipated to generate less trips than the threshold to require a TIA.

Findings and Summary

Based on the trip generation results, it is expected that the proposed Carolina Legacy Volleyball development will have a minimal impact on the surrounding roadway network. The peak hour trip generation potential for this proposed development is less than the threshold to require a traffic impact study (100 vehicles per hour or 1,000 new vehicles per day) based on the Town's ordinance.



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